

AMENDMENTS IN THE CLAIMS:

1.(currently amended): A service setting system comprising:

at least more than one service control apparatus for controlling whether setting of service requested for communication should be performed, based on a service request packet received from a relay apparatus;

a source communication terminal for transmitting the service request packet, wherein the service request packet stores a parameter of a service requested for the communication, an address of a communicating apparatus of a [[said]] service target, a current source address which is an address of origin and a current destination address which is an address of designation both for transferring and receiving own packets; and

a relay apparatus for judging whether said service request packet should be transmitted to said service control apparatus which controls own said setting of service based on said current source address in said service request packet;

wherein said relay apparatus transfers said service request packet to a service control apparatus controlling the relay apparatus, if said current source address in said service request packet does not indicate an address of a service control apparatus, and said relay apparatus transfers said service request packet to an apparatus except a service control apparatus which should next be received if said current source address in said service request packet indicates an address of a service control apparatus, and

wherein said service control apparatus:

has a first path information storing a correspondence relationship between an address of a communication terminal which is a designation of said service request packet request and an address of an apparatus which is a designation of a next service request packet;

rewrites said current source address in said service request packet to an own address based on said first path information of receiving said service request packet;

transmits a service request packet, in which said current source address and said current destination address is rewritten, to an apparatus indicated in a current destination address after rewriting said current destination address in said service request packet to an address of an apparatus which is a designation of the next service request packet; and

transmits said service request packet in a case where said setting of service requested for communication is permitted.

2.(previously presented): The service setting system according to claim 1

further comprising:

a proxy server for transmitting said service request packet.

3.(currently amended): A service setting system comprising:

at least more than one service control apparatus for controlling whether setting of service requested for communication should be performed, based on a service request packet received from a relay apparatus;

a proxy server for transmitting the service request packet, wherein the service request packet stores a parameter of a service requested for said communication, an address of a communicating apparatus of a [[said]] service target, a current source address which is an address of origin, and a current destination address which is an address of designation both for transferring and receiving own packets; and

a relay apparatus for judging whether said service request packet should be transmitted to said service control apparatus which controls own said setting of service based on said current source address in said service request packet;

wherein said relay apparatus transfers said service request packet to a service control ~~device~~ apparatus controlling the relay apparatus if said current source address in said service request packet does not indicate an address of a service control apparatus, and said relay apparatus transfers said service request packet to an apparatus except a service control apparatus which should next be received if said current source address in said service request packet indicates an address of a service control device, and

wherein said service control apparatus:

has a first path information storing a correspondence relationship between
an address of a communication terminal which is a designation of said service request
packet request and an address of an apparatus which is a designation of a next service
request packet;

rewrites said current source address in said service request packet to an
own address based on said first path information of receiving said service request packet;

transmits a service request packet, in which said current source address and
said current destination address is rewritten, to an apparatus indicated in a current
destination address after rewriting said current destination address in said service request
packet to an address of an apparatus which is a designation of the next service request
packet; and

transmits said service request packet in case said setting of service
requested for communication is permitted.

4. (cancelled)

5.(currently amended): The service setting system according to claim [[4]] 1

wherein:

said service control apparatus stores information of apparatus, that one service control apparatus controls setting regarding service, and an address of said one service control apparatus in said first path information;

said service control apparatus, which received said service request packet, rewrites said current source address in said service request packet to an own address on receiving said service request packet, in case that an apparatus, which is a next designation of said service request packet, is not an apparatus controlling a setting of oneself, and an address of other service control apparatus controlling an apparatus, which is a designation of said next service request packet, is stored in said next path information based on the first said path information; and

transmits a service request packet, in which said current source address and said current destination address are rewritten, to said service control apparatus indicated in a current destination address after rewriting said current destination address in said service request packet to an address of said other service control apparatus indicated in the first said path information.

6. (cancelled)

7.(previously presented): The service setting system according to any one of claims 1 to 3, wherein:

said relay apparatus has a second path information storing correspondence relationship between an address of a communication terminal, which is a designation of said service request packet, and an address of an apparatus that is a designation of a next service request packet;

rewrites said current source address in said service request packet to an own address, in case said current source address is an address indicating said service control apparatus on receiving said service request packet, based on the said second path information; and

transmits said current source address and said current destination address to an apparatus indicated in a current destination address after having rewritten said current destination address in a said service request packet to an address of an apparatus which is a designation of the next service request packet.

8.(previously presented): The service setting system according to any one of claims 1 to 3, wherein:

said relay apparatus has a third path information storing correspondence relationship between an address of a communication terminal which is a designation of

said service request packet and an address of an apparatus which is a designation of a next service request packet;

rewrites said current source address in said service request packet to an own address, in case said current source address is not an address indicating said service control apparatus on receiving said service request packet, based on the said third path information; and

transmits a service request packet, in which said current source address and said current destination address are rewritten, to said service control apparatus that controls own said setting of service after having rewritten said current destination address in said service request packet to an address of a service control apparatus which is a designation of the next service request packet.

9.(previously presented): The service setting system according to any one of claims 1 to 3, further comprising:

one communication terminal of at least more than 2 communication terminals communicating with each other,

being a designation of said communication which transmits a packet of completion notice indicating that said communication terminal had received said service request packet,

wherein said packet of completion notice stores an own address as a current source address, which is an address of a source apparatus between apparatuses that currently performs transmission and reception of data in said communication, and a current destination address which is an address of a destination apparatus between apparatuses that currently performs transmission and reception of data.

10.(Original): The service setting system according to claim 9 further comprising:

a proxy server for transmitting said packet of completion notice.

11.(previously presented): The service setting system according to any one of claims 1 to 3 further comprising:

a proxy server connected to a communicating communication terminal through a network, transmitting a packet of completion notice indicating that said proxy server has received said service request packet;

wherein said packet of completion notice stores an own address as a current source address, which is an address of a source apparatus between apparatuses that currently performs transmission and reception of data in said communication, and a current destination address which is an address of a destination apparatus between apparatuses that currently perform transmission and reception of data.

12.(previously presented): The service setting system according to claim 9

wherein:

said service control apparatus has a first storing means for storing said current source address before rewriting in said received service request packet;

said service control apparatus, which received said completion notice, rewrites said current source address in said service request packet to an own address; and

said service control apparatus rewrites said current destination address in said service request packet to an address stored in said first storing means, and said service control apparatus transmits a packet of completion notice, in which said current source address and said current destination address is rewritten.

13.(previously presented): The service setting system according to claim 9

wherein:

said relay apparatus has a second storing means for storing said current source address before rewriting in received said service request packet;

said relay apparatus, which received said packet of completion notice, rewrites said current source address in said service request packet to an own address; and

said relay apparatus transmits rewrites said current destination address in said service request packet to an address stored in said second storing means; and said relay apparatus transmits a packet of completion notice, in which said current source address and said current destination address is rewritten.

14.(previously presented): The service setting system according to claim 9,
wherein:

said service control apparatus and said relay apparatus have a fourth path
information storing correspondence relationship between an address of a communication
terminal, which is a designation of said service request packet, and an address of an
apparatus, which is a designation of a next service request packet;

rewrite said current source address in said packet of completion notice to an own
address in receiving said packet of completion notice based on the said fourth path
information; and

rewrite said current destination address in a said packet of completion notice to
an address of a service control apparatus which is a designation of the next service
request packet and transmit a service request packet, in which said current source
address and said current destination address are rewritten, to an apparatus indicated in
said current destination address.

15.(previously presented): The service setting system according to claim 9,
wherein:

said service control apparatus performs setting on said service requested for
communication to said relay apparatus on receiving said packet of completion notice,
based on a parameter on said service requested for communication stored in said service
request packet.

16.(previously presented): The service setting system according to any one of claims 1 to 3, wherein:

said service control apparatus performs setting on said service requested for communication to said relay apparatus on receiving said service request packet based, on a parameter of said service requested for communication stored in said service request packet.

17.(previously presented): The service setting system according to any one of claims 1 to 3, further comprising:

one communication terminal of at least more than 2 communication terminals communicating with each other, transmitting an error packet indicating provision of said service is not possible after having received said service request packet;

wherein said error packet stores, an own address as a current source address which is an address of an origin between apparatuses which currently perform transmission and reception of data in said communication, and

a current destination address that is a designation between apparatuses, which currently perform transmission and reception of data in said communication, in case a provision of said service is not possible.

18. (Original) The service setting system according to claim 17 further comprising:

a proxy server which transmits said error packet.

19.(previously presented): The service setting system according to any one of claims 1 to 3, further comprising:

a proxy server connected to the communication terminal, which communicates through a network, transmitting an error packet indicating that the provision of said service is not possible in case a provision of said service is not possible;

wherein said error packet stores an own address as the current source address which is an address of origin between apparatuses currently performing transmission and reception of data in said communication, and a current destination address which is an address of designation between apparatuses currently performing transmission and reception of data in said communication.

20.(previously presented): The service setting system according to any one of claims 1 to 3, wherein:

said service control apparatus transmits an error packet, which indicates that the provision of said service is not possible, after having received said service request packet in case a provision of said service is not possible;

wherein said error packet stores an own address as a current source address which is an address of origin between apparatuses currently performing transmission and reception of data in said communication and a current destination address which is an address of designation between apparatuses currently performing transmission and reception of data in said communication.

21.(previously presented): The service setting system according to claim 17,
wherein:

said service control apparatus has a third memory means for storing said current
source address before rewriting in said received service request packet;

said service control apparatus, which received said error packet, rewrites said
current source address in a said error packet to an own address, and rewrites said current
destination address in said error packet to a current source address stored in said third
memory means, and transmits an error packet, in which said current source address and
said current destination address are rewritten, to an apparatus indicated in an address
stored in said third memory means.

22.(previously presented): The service setting system according to claim 17,
wherein:

said relay apparatus has a fourth memory means for storing said current source
address before rewriting in said received service request packet, transmits an error
packet, in which said current source address and said current destination address are
rewritten, to an apparatus indicated in an address stored in said fourth memory means
after said relay apparatus, which received said error packet, rewrites said current source
address in said error packet to an own address, and rewrites said current destination
address in said error packet to an address stored in said fourth memory means.

23.(previously presented): The service setting system according to claim 17,

wherein:

said service control apparatus and said relay apparatus have a fifth path information storing a correspondence relation between an address of a communication terminal which is a designation of said service request packet and an address of an apparatus that is a next designation of a service request packet,

rewrite said current destination address in a said error packet to an address of an apparatus, which is a designation of a next error packet, based on said fifth path information on receiving said error packet, and

rewrite said current source address in said error packet to an own address, and transmit an error packet, in which said current source address and said current destination address are rewritten, to an apparatus indicated in said current destination address.

24.(previously presented): The service setting system according to claim 17,

wherein:

said service control apparatus releases a setting for the service which has already been performed for said relay apparatus in case said service control apparatus receives said error packet.

25.(previously presented): The service setting system according to any one of claims 1 to 3, wherein:

said communication terminal transmits a packet of path search, which is a packet transmitted by a predetermined time interval before said service request packet is transmitted, wherein said packet of path search stores an own address as a current source address which is an address of origin between apparatuses currently performing transmission and reception of data in said communication,

a current destination address which is an address of designation between apparatuses currently performing transmission and reception of data, and

an own address as a last relay apparatus destination address which is an address of an destination apparatus, where said source communication terminal transmits said service request packet to;

a relay apparatus which received said packet of path search rewrites said last relay apparatus destination address to an address of a service control apparatus controlling said own setting and transmits said packet of path search.

26.(previously presented): The service setting system according to any one of claims 1 to 3, further comprising:

a proxy server for transmitting a packet of path search, which is a packet transmitted by a predetermined time interval before said service request packet is transmitted, storing an own address as a current source address, which is an address of

origin, between apparatuses which currently perform transmission and reception of data in said communication, a current destination address which is an address of designation between apparatuses currently performing transmission and reception of data, and

a last relay apparatus destination address which is an address of an apparatus of designation transmitting said service request packet;

a relay apparatus, which received said packet of path search, rewrites said last relay apparatus destination address to an address of service control apparatus controlling said own setting, and transmits said packet of path search.

27.(previously presented): The service setting system according to claim 25, wherein:

an address of said service control apparatus stored in said last relay apparatus destination address is an address corresponding to an address of each apparatus rewriting said last relay apparatus destination address.

28.(previously presented): The service setting system according to claim 25, wherein:

said communication terminal, which received said packet of path search, takes out said last relay apparatus destination address of a said packet of path search and stores said taken out last relay apparatus destination address as a current destination address of said service request packet.

29.(previously presented): The service setting system according to claim 25,
wherein:

a relay apparatus, which received said packet of path search, stores an own address to said packet of path search as an ingress relay apparatus address in case said current source address before rewriting in said packet of path search is not an address of the apparatus in which a setting is controlled by a service control apparatus controlling said own setting.

30.(previously presented): The service setting system according to claim 29,
wherein:

said communication terminal, which received said packet of path search, takes out said ingress relay apparatus address of a said packet of path search, and stores said ingress relay apparatus address to said service request packet;

a service control apparatus, which received said service request packet, takes out said ingress relay apparatus address of said service request packet, rewrites a current transmission address of said service request packet with said taken-out ingress relay apparatus address, and transmits said service request packet.

31.(previously presented): The service setting system according to claim 25,
wherein:

said relay apparatus has a fifth memory means for storing said current source address before rewriting in said packet of path search which was received;

rewrites a current destination address of said service request packet to an address stored in said fifth memory means and transmits said service request packet to an apparatus indicated in a current destination address in case said service request packet is transmitted from said service control apparatus who controlled own setting when said relay apparatus received said service request packet.

32.(previously presented): The service setting system according to any one of claims 1 to 3, wherein:

a source communication terminal, which is an origin of said communication, transmits a packet of path search, which is a packet transmitted to said destination communication terminal by a predetermined time interval, storing an own address as a current source address which is an address of origin between apparatuses which currently perform transmission and reception of data in said communication,

a current destination address which is an address of designation between apparatuses currently performing transmission and reception of data, and

a last relay apparatus destination address which is an address of an apparatus that is a designation where said communication terminal transmits said service request packet to;

a relay apparatus, which received said packet of path search, rewrites a last relay apparatus destination address in said packet of path search to an own address, and transmits said packet of path search to a service control apparatus controlling own said

setting after having rewritten said current destination address to an address of the service control apparatus, which controls own said setting, in case said current source address before rewriting is not an address of an apparatus in which a setting is controlled by a service control apparatus controlling said own setting.

33. (original) The service setting system according to claim 32 wherein:
a service control apparatus, which received said packet of path search, rewrites said current destination address in said packet of path search to an address of an apparatus of designation of the next packet of path search; and
transmits said packet of path search to an apparatus indicated in a current destination address.

34. (currently amended) A service setting method comprising:
transmitting a service request packet, storing a parameter of service requested to communication, a current source address which is an address of origin between apparatuses which currently perform transmission and reception of data in said communication, and a current destination address which is an address of a destination apparatus between apparatuses which currently perform transmission and reception of data in said communication;
controlling whether a service requested from said communication is performed;

rewriting said current source address in said service request packet on receiving said service request packet;

judging whether a service request packet, in which said current source address is rewritten, is transmitted to a controlling apparatus controlling setting of said service based on said current source address before rewriting in said service request packet;

transmitting said service request packet to the controlling apparatus if said current source address in said service request packet does not indicate an address of the controlling apparatus;

transmitting said service request packet to an apparatus except the controlling apparatus which should receive next, if said current source address in said service request packet indicates an address of the controlling apparatus, and

wherein said controlling apparatus further including

storing a correspondence relationship between an address of a communication terminal which is a designation of said service request packet request and an address of an apparatus which is a designation of a next service request packet;

rewriting said current source address in said service request packet to an own address based on said first path information of receiving said service request packet;

transmitting a service request packet, in which said current source address and said current destination address is rewritten, to an apparatus indicated in a current

destination address after rewriting said current destination address in said service request packet to an address of an apparatus which is a designation of the next service request packet; and

transmitting said service request packet in a case where said setting of service requested for communication is permitted.

35.(currently amended): A relay apparatus for receiving a service request packet, said service request packet storing

a parameter of service requested for communication,

a current source address which is an address of a source apparatus between apparatuses which currently perform transmission and reception of data in said communication, and

a current destination address which is an address of a destination apparatus between apparatuses which currently perform transmission and reception of data in said communication;

wherein said relay apparatus

relays data necessary for said communication,

rewrites an origin of said existing transmission of a message address in said-service request packet to an own address on receiving said service request packet,

rewrites said current destination address in said service request packet to an address of a destination apparatus of a next service request packet, and judges whether a service request packet, in which an origin of said current transmission of a message address and said current destination address is rewritten, should be transmitted to a service control apparatus, which controls a setting of service requested for own said communication, based on said current source address before rewriting in said service request packet;

wherein said relay apparatus transfers said service request packet to a service control device controlling the relay apparatus if said current source address in said service request packet does not indicate an address of a service control apparatus, and said relay apparatus transfers said service request packet to an apparatus except a service control apparatus which should next be received if said current source address in said service request packet indicates an address of a service control device, and

wherein:

said service control apparatus has a first path information storing a correspondence relationship between an address of a communication terminal which is a designation of said service request packet request and an address of an apparatus which is a designation of a next service request packet;

rewrites said current source address in said service request packet to an own address based on said first path information of receiving said service request packet;

transmits a service request packet, in which said current source address and said current destination address is rewritten, to an apparatus indicated in a current destination address after rewriting said current destination address in said service request packet to an address of an apparatus which is a designation of the next service request packet; and

said service control apparatus transmits said service request packet in a case where said setting of service requested for communication is permitted.

36.(currently amended) A relay apparatus for receiving a path search packet, wherein:

said path search packet stores

a current source address, which is an address of origin between apparatuses that currently perform transmission and reception of data in communication,

a current destination address which is an address of designation between apparatuses which currently perform transmission and reception of data in said communication, and

a last relay apparatus destination address which is a last relay apparatus destination address which is an address of a destination apparatus of a service request packet that transmits a communication terminal requires service for said communication;

rewrites said last relay apparatus destination address to an address of a service control apparatus controlling own said setting in a case where said current source address before rewriting is not an address of an apparatus, whose setting is controlled by [[a]] the service control apparatus which controls setting of service requested for own said communication, on receiving said path search packet, and transmits said path search packet, and

wherein:

said service control apparatus has a first path information storing a correspondence relationship between an address of a communication terminal which is a designation of said service request packet request and an address of an apparatus which is a designation of a next service request packet;

rewrites said current source address in said service request packet to an own address based on said first path information of receiving said service request packet;
and

transmits a service request packet, in which said current source address and said current destination address is rewritten, to an apparatus indicated in a current destination address after rewriting said current destination address in said service request packet to an address of an apparatus which is a designation of the next service request packet; and

said service control apparatus transmits said service request packet in a case where said setting of service requested for communication is permitted.

37.(previously presented): The service setting system according to claim 1, wherein:

said service control apparatus detects the relay apparatus which relay a communication being a target of service relating to said service request packet, communicates with all relay apparatuses that are detected, and performs setting necessary in service provision for these relay apparatus.